

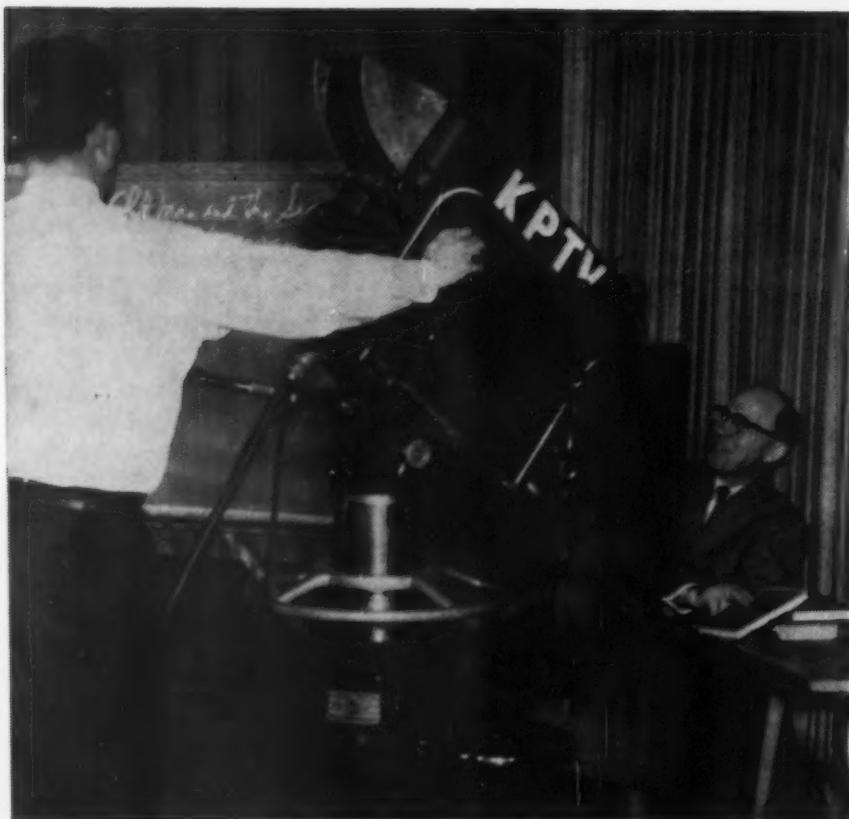


# JOURNAL

OCTOBER 1956



**HEROLD C. HUNT: Education by Television**



*AN OPENING SHOT is made for Oregon's General Extension Division's telecourse series, *The Modern American Novel*. See the article by Don Somerville, page 9.*

## THE AERT JOURNAL

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## Teaching BY Television

### Giving the whole lesson by sound and camera is today's challenge

- TEACHING by television is a new and many splendored thing—it assumes that the *whole* lesson may be given by sound and camera.

Herein lies the difference between teaching *by* television and teaching *with* television. Teaching with television, like teaching with all audio-visual illustrations, is simply adding to the lesson, at the appropriate time and place, materials which otherwise would not ordinarily be available. These materials show by example what the teacher is endeavoring to explain or demonstrate. Let us say the lesson is on the signing of the Declaration of Independence. You could *tell* about the signing on July 2 (not the 4th) of July 1776; but if you could bring to the lesson a vivid bit of drama, in which the participants, led by John Hancock, signed away forever the rights and privileges of British citizenship, embarking on a revolution which soon, like the shot at Lexington, would be heard 'round the world,

then you would have made every student fully *aware* of this episode in our American history. For out of this came his choicest possession, the privilege of being a citizen of the United States. Such teaching, we must all admit, is to be sought for, at any stage in the development of the learning process. It justifies the use of any well-tested means of audio or visual illustration.

Teaching by television assumes that the *whole* lesson may be given

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By HEROLD C. HUNT

*Under Secretary, Department of Health, Education and Welfare. From a speech made at Harvard.*

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by sound and camera. Why it was not advanced during the long years of motion-picture development, is hard to discover. As a matter of fact, it was, to a very limited degree.

I rather think the static quality injected into any recorded material simply *because* it is recorded was one of the reasons. It is far more advantageous to record good illustrations for use that have rather permanent value than to tamper with a medium which is necessarily one requiring great flexibility and individual expression, such as the daily lesson. At any rate, television lends itself to that flexibility and individuality because changes and corrections can be made almost instantaneously with little cost. This applies to live television, as well as copied kinescope.

● A LOOK at the growth of educational television, since the famous *Sixth Order and Report* of the Federal Communications Commission which resulted in giving 258 channels of the portion of the spectrum set aside for television purposes, exclusively to non-commercial educational TV, is bound to bring with it a certain pride even though these four years have been filled with both trial and tribula-

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**In or out-of-school  
TV is here to stay . . .**

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tion. Evidently, commercial broadcasters have not, in that period, been without their trials and tribulations either.

Many commercial stations have given generously of their available time and staffs to the educational TV experiments of the past four years. Naturally, all of the 22 educational stations on the air are anxious to contribute to the uses of educational broadcasting as a direct

teaching medium, but find that their budgets will not stand it, unless subvention of funds for that purpose are available. The commercial broadcaster must necessarily give *unsaleable* time to education and finds it impossible, for the most part, to give adequate rehearsal time. He does, however, often over-work his staff to provide direction and production of teaching programs calculated to be received by relatively small audiences. He realizes often this is not good economics but he does it for good public relations and so charges it off as such an expense. The educational broadcaster has no such excuse, so he must charge the time and production costs to the institution, be it public school system or college or university that uses such services.

● THESE educational services break down into at least four categories:

- 1) The telecourse for adults (with or without university credit.)
- 2) The general educational program (often in series) viz: as provided by the Educational Television and Radio Center.
- 3) The illustrative school program (received either within school time or as an out-of-school assignment).
- 4) The direct teaching program within the elementary school, high school or college or even outside of school-time for credit, as make-up classes or continuation school.

It is on the last of these categories that I wish to concentrate here. Those of us who have had experience as administrators of radio schools of the air or like projects bring to this problem a certain amount of cumulative thinking that at once defines our audience, al-

lows for means of adaptation of class-room procedures, and provides some basis for testing results.

It is true we are working in a new medium but our incidental motion-picture experience and uses of many other visual aids, help immensely to make the transition required to effectively utilize television. There is a certain exhilaration in this new challenge and we know from the outset, we are not

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**... Unless we make full  
use of its potential. . .**

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just going to put cameras on the usual traditional class-room procedures.

At Ames, at Houston, at N.Y.U., at Michigan State, at San Francisco State, at Denver, at Illinois, at Michigan, at Wisconsin, at the University of Washington, at Western Reserve, at Toledo, at Iowa, at Marquette, at Cornell, at Boston College, at Boston University, at Harvard, at Southern California, at Creighton, and many, many other universities that produce telecourses, this background of radio experience was all-present, even though not directed, of course, to programs for university credit. That is the new and vitally important acceptance of television as a legitimate means of direct teaching on the college and university level. Two conferences have been held by the American Council on Education in this field—one, to bring together the shared experiences of fitting television courses into the university structure and, two, to evaluate the importance of closed-circuit television as a means of direct

teaching on the college campus or the extended uses of television within the framework of higher education. The results of the first conference held in 1955 are published and the results of the second will be available this month as an ACE publication.

● THUS, the subject of closed-circuit television is injected into the picture. It is, no doubt, the fastest growing phase of in-school television and offers many possibilities for the development of television teaching both as an art and a science. May I leave it for a moment and return to it later? Our principal concern, it seems to me, should be these physical attributes of television which lend themselves to the learning process for both broadcast and closed-circuit television share

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**... we shall fail our  
profession—and nation.**

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equally in the utilization of these factors, which together with applied teaching techniques, make up the sole content of our experience to date.

These factors, likewise, apply to the pre-school, elementary school, to the high school and are essentially present in make-up classes and the continuation school where reception is accompanied by text, outlines and other printed matter along with the program received in the home.

No more fertile field for television is to be found certainly than in the pre-school. The widely acclaimed success of Miss Frances

*Continued on page 27*

# From Your President

LEO A. MARTIN

• WE WHO ARE identified with the production of the *AERT JOURNAL* know what is meant by a rise in the cost-of-living index.

The *JOURNAL* almost became a casualty recently due to higher costs of printing, engraving, labor and so forth. Herein lies a story which might interest you:

You are aware that the only sources of income for *AERT* are dues and subscriptions. There was a time when we could publish and circulate eight *JOURNAL* issues, engage clerical help and purchase office supplies on a minimal basis, budget for essential travel, and meet the expenses of the Annual Convention from the receipts. But not during recent years. The steadily rising costs of publication and the loss of advertising revenue - - - which never was sizeable - - - have made a case for dues increases. But dues have not been raised for several years.

As greater proportions of income were required to maintain the *JOURNAL*, less was available for such member services as research in utilization methods and results, communications with members reporting new developments, and clinics and seminars in regional locations. During the past year, *all* income had to be channelled into the *JOURNAL*. As *JOURNAL* costs increased, member services and operating expenses had to decrease.

A majority of your Board of Directors have consistently held the opinion that the *JOURNAL* is *AERT*. They have thought that it fulfills a real need for leaders in educational radio and television. They have also maintained that its value has grown over the years due to its unique and objective reporting of progress in the utilization of broadcasting.

Last spring, we learned that our publisher was unwilling to renew his agreement with us at the prevailing rate. We found, after considerable investigation, that we could locate no other publisher who could deal with us on the basis of anticipated income.

There were possible alternatives of alternate month issues or operation on a quarterly basis. These were not attractive because we had already accepted advance subscriptions and dues on the eight-issue basis. But what could we do?? The financial facts of life were largely immovable.

Fortunately, the National Association of Educational Broadcasters offered assistance. Frank Schooley, President of *NAEB*, appointed a committee to study the problem. On the basis of that study, the *NAEB* offered to assume temporary responsibility for the continuation of the *JOURNAL* with its existing format, policies and commit-

*Continued on page 30*

## *Are Important Radio Listeners Being Overlooked?*

• FEW would deny the fact that the impression of Americans which people in other countries obtain from seeing our movies has seriously injured American prestige. Many also feel that Americans have been "losing face" in recent months in the eyes of the thousands of foreign students and visitors to this country who hear present-day commercial radio programs. Admittedly, a great deal of radio programming has always been of a poorer quality than discriminating listeners sought, but the programs which they formerly enjoyed have long since disappeared and to many, radio programming has lost ground with the growth of television and the inevitable division of the potential audience between the two media.

Today, the trend in radio seems to be to descend to any level of programming, regardless of how low, in an effort to win back from television some of its lost audience. The predominance of the disc jockey show, "Rock and Roll," and Elvis Presley are good examples.

• WHO are today's radio listeners? And if there is a seasonal difference, who listens during the summer or vacation period?

Radio ownership is increasing, we are told, in spite of the booming

market for television sets. An automobile without a radio today is the exception rather than the rule. Although few vacation cabins have television, practically all have radio. There are also millions who have portables or personal radios. Thus it will be seen that there are large groups of radio listeners who are in automobiles or at picnic or vacation spots. Most of them might accurately be classified as above average in economic status and in discrimination. Advertisers are anxious to reach them because of their substantial incomes. Yet these people and others who are "fed up" with the bulk of the television fare are not being adequately served by today's commercial radio programs. Those who live within the service areas of educational radio stations are fortunate. They have a choice. The bulk of these important groups of radio listeners do not. Their tastes cannot be sampled in listener surveys since they cannot be reached by phone in their cars or at vacation or picnic spots.

• WILL advertisers and radio program managers soon wake up? Perhaps a real attempt to serve them might place radio in a better competitive position.

TRACY F. TYLER, *Editor.*



*PERSPECTIVE*, their book show, is discussed by Professor George Hoffman, Portland State College; Visiting Professor Frederick Cox, University of Alabama; Professor Don Somerville, series' coordinator

# FRAGILE...

## Handle With Care!

**The TV amateur needs feedback,  
physical and mental preparation**

● TO LOOK a television camera square in the eyes for the first time can be a harrowing experience. Each person's effectiveness in subsequent appearances may depend upon whether or not he can adjust to the medium.

Most obstacles to adjustment for the non-professional performer are evident. How these can be overcome or circumvented is the purpose of this article. A partial solution rests within two generalizations. First, he must be mentally and physically oriented or prepared. And second, he needs a form of feedback.

The unfamiliar complex of lights, artificial setting, camera movement, intercom talk, and absence of a

live audience is made more formidable by the need to observe the peculiar requirements of the medium such as limitations of time and

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**By DON SOMERVILLE**

*Associate Professor, General Extension Division, Oregon State System of Higher Education.*

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space. Add to these a feeling of inadequacy in a foreign medium and the non-professional is often tempted to throw in the chalk after his first performance.

Faced with these difficulties it is necessary to prepare the performer

both mentally and physically. To prepare him mentally he should realize that television is an intimate medium where one or two persons comprise his "audience" rather than an audience in the traditional sense. Physically he should be concerned only with his particular role in the programming. There is attrition in taking care of picayune details such as making sure an eraser is at the blackboard or checking slides or charts to see that they are in order.

● WHETHER he is on a regular series or on a one-shot basis he will feel psychologically "at home" if he is introduced to his cameramen, floor director and announcer. This is a small matter but one which is invaluable in establishing the critical coordination which is so necessary to technically successful programming.

In addition to the need for psychological preparation the performer must have some form of feedback. Feedback is the process of being able to adjust future actions by past performance.\* Since there is no two-way communication between the performer and his audience as in a lecture or classroom situation, feedback must be induced artificially. Without feedback the tendency is for the quality of performance to deteriorate. A form of feedback is necessary so he may make changes in his method of presentation, strengthen his self-confidence, and in some cases establish his worth in his own mind. There are a number of ways to set up feedback. Quantitatively this

can be done through audience measurement, controlled experiments, or even through the sale of guides and responses to offers of brochures, giveaways, and reading lists. However, perhaps the most important form of feedback to the performer is through critical evaluation by individuals in whom he has confidence. Its importance lies in the fact that it is immediate and specific.

Criticism of method and content must be handled by the two or three persons intimately concerned with the on-the-air performance, the institution's producer or coordinator and the studio director. The performer tends to have the greatest confidence in these two persons. The performer will receive criticism from a number of people including his associates or acquaintances, administrator, and his wife. Interested parties tend to generalize and justifiably withhold adverse criticism. The administrator may not be competent to criticize and if he is he (rightly so) tends to play the role of cheer leader. And his wife—. So the performer seems to have the greatest confidence in the persons with the most experience and the most at stake, his producer and director.

● CRITICISM is most effective when it becomes a routine procedure and is most meaningful when it takes place immediately after each performance. When a performer asks, "How did I do?", he is usually asking, "What can I do to do a better job?" Obviously, criticism limited to what he did "right" is doing the performer an injustice. But it is the experience of producers and directors that as program follows program in a series the per-

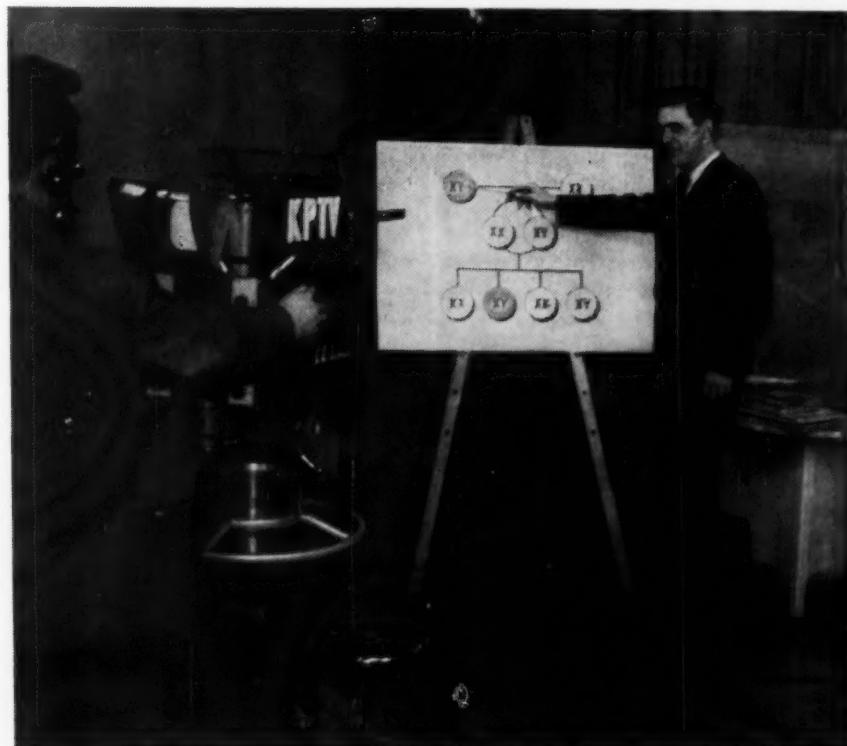
\* For a description of the theory of feedback, see: Norbert Wiener, *Cybernetics*, New York: John Wiley and Sons, 1948; and *The Human Use of Human Beings*, Boston: Houghton Mifflin Co., 1950.

former needs less and less regular criticism. This is true because technical, on-camera, requirements have been mastered and psychological blocks dissipated. When this stage is reached, whenever it might be, the performer leans less upon others and evolves to his own distinctive personality.

A caution should be noted. After a performer in a series of programs has been acclimated he may reach a plateau of effectiveness where he may exhibit less enthusiasm than during the flush

of the first weeks of programming. The symptoms of disinterest and fatigue are generally due to diminishing feedback. It is then necessary to inject either a fresh critical viewpoint or complete audience measurement and controlled testing begun at the outset of the series. However, until adjustment does take place during the first few weeks of programming most performers need, indeed must have, both mental and physical preparation and some form of continuing feedback.

*ILLUSTRATING genetic factors in heredity on a Child Growth and Development series is John Schulz, associate professor, Oregon's General Extension Div'n.*



*are soap opera standards...*

## WE HAVE A PUBLIC

● THERE IS a tough public relations job ahead of us!

As educational broadcasters how can we explain that undiluted course content is a legitimate use of broadcasting frequencies? How are we to explain to people, conditioned by commercial radio and TV to expect to find at all times on their set something general enough to be acceptable, that real educational TV and radio can not be that general and still serve curricular needs? How explain that educational programs, if they are to meet the needs of the schools of our time, are bound to be keyed to instruction, to be really educational instead of merely "of a higher order?"

We can, of course, use several analogies. We can refer to the British and Canadian "third programs." But these are more nearly expansions of "Omnibus," and the best of literature, lectures, concerts and recitals which are now legitimate national commercial network "prestige" areas. They are intended to appeal to more than specific students in a single subject area at a time, and at a specific level. They are designed for the educated more than to educate.

We can perhaps better use the analogy of the movies, the theatre,

the concert hall, or the paid-admission lecture on one hand, as distinguished from the school, the adult education, extension or correspondence course, or even the Sunday school, on the other. The whole family can attend, understand (in different ways and levels,) and accept all parts of the former group (the concert, movie or lecture.) But as soon as a specific subject or age group is the specific target of a program or course, others find it objectionable for them. Of course we recognize that this specificity is natural or inevitable when real school classes or even Sunday school classes are involved. We

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By **HARRY J. SKORNIA**

*Executive Director, NAEB.  
From a speech made at the  
1956 Convention of the Ameri-  
can College Public Relations  
Association.*

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expect to visit such a class prepared to be either bored, or mystified -- to feel either superior or inferior to the students. But we don't therefore doubt either that the very great specificity of what is offered, or the care with which the instructor sticks to the subject, are

# RELATIONS PROBLEM

## *...applicable to education?*

both necessary and legitimate. We judge the instructor as a teacher rather than as an entertainer, in the last analysis.

But put the same "educational" material on the air, and there are objections. Even the most enlightened of us, who should know better, are somehow outraged. This, on television -- or on radio? Yet the job being done is no less excellent -- and is generally better than that being done in the classroom.

• THE REAL reason we are outraged, annoyed, or at least surprised, is found in the 30 years of conditioning that we have received from commercial usages and stations. It is contrary to the tradition now firmly established that whether good or bad, the most frequent commercial programs, the ones we've come to expect under the general heading of "radio" or "television," do not antagonize anybody. If the material is too hard, we either cut it out, dress it up, or water it down. But the good commercial broadcaster knows that he must remain general in his appeal, if he is to hold a general audience. He "knows" that sustained, concentrated high-level intellectual effort must not be required of the listener

or viewer, except on the few prestige programs they have, and these are generally not tied to any one grade level, age, or occupational group.

This is not to blame or accuse the American commercial station operator of failure to do his duty. Techniques valid for business or advertising are often not good techniques of real education, though they are admittedly frequently good for purposes of conveying information, which is something less than the regular program of education we're talking about. But the needs of education are so great that no commercial stations could satisfy them and still remain solvent or hold the constant general audience --they have to operate profitably. It is because so many of the most enlightened commercial broadcasters have realized this that so many of them have so generously contributed to the establishment of educational stations.

But how are we to explain to the general public that education, i. e. specific, thorough education-in-depth, is really as much entitled to radio and TV frequencies of its own as the give-away program or the comic? For instance I may personally be irritated by give-aways. But they are justified on

the basis of the fact that they sell soap, or deodorants, or cars. Therefore our dislike becomes resigned tolerance, and we don't raise any uproar simply because a given program doesn't meet our personal taste, or satisfy any real need for us personally. Yet educational minority broadcasts somehow do encounter criticism in many areas for this same reason.

● THE KEY in this situation is the problem of quantity versus quality as a basis of evaluation. Many people will be shocked even to have this question raised. Most of us feel that we've struck a fair compromise in our own set of values. But have we? Certainly, you will tell me, a "mass" medium must reach many people to justify its expense, and its use of a radio or TV frequency.

This is undoubtedly true up to a certain point. But I refuse to admit that listenership standards designed by and for advertising and sales purposes are valid for education. Education has never been a quantity operation. We've always

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**Education has never  
been a quantity operation.**

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had to divide people into small homogeneous groups in order to get it across. And the more educators have skirted specificity and education-in-depth in their programs, - - i.e. the "better" they have met advertising-based commercial broadcast standards - - to that extent they have been less the educator and more the general

broadcaster and/or "public relations man."

● SOME WEEKS ago an educational broadcaster told me, as we drove away from the UHF transmitter of an educational TV station we had just visited, that he was glad he didn't have to operate it. As I recall, the likely audience of this station would not be over some 50,000 or 80,000 people for a long time - - too small an audience to justify the expense. I inquired by whose standards 50,000 people is too small a number of people to reach with an instrument costing perhaps \$200,000 to set up or \$150,000 per year to operate. The reply was that by any known commercial broadcast standards this would be a negligible audience.

I refuse to admit that \$7.00 or so per person per year (though 30 cents to a dollar would be nearer the average) is too high a price to pay for educational materials via television. I refuse to admit the applicability of commercially developed listenership tables and standards to education. One Big Ten University spends over fifty million dollars a year to educate only 25,000 students. Of course, like ETV, it does other things and serves other people and purposes besides. But this figures out to about \$2,000 per known student per year. Is this too much? How much is it costing to educate each high-school student, including the cost of buildings and other capital investments? Is the proportion of this load which ETV can bear, out of line with that figure? By commercial standards, an ETV station or radio station may be unjustifiable for education's present audiences. But by educational stan-

dards, in comparison with costs based on present tools and methods, TV and radio are almost unbelievably economical. And what we're talking about is TV and radio for education, as regular educational tools, bearing the same kind of load and fulfilling the same kind of function as textbooks, classrooms, and other indispensable tools to learning.

● LET'S LOOK a little closer at whether this analysis is so far different from what we're used to. Let's take a given educational program in high school mathematics. The primary audience for this program is mathematics students. Some of them are in regular classes. Some who enroll are adults who can't go back to school because of work or other schedule problems -- perhaps because they don't want to undergo the humiliation of attending classes with younger students. Others will be "eager eavesdroppers" who enjoy a review, refresher or "something different." Of the remaining possible listeners, some, though indifferent, will leave the set on and pick up something here and there; and some, who never liked "math," will turn it off.

But is this so much different from listeners to, for example, a give-away program? This sort of program likewise has something less than universal appeal. It is not the answer to everyone's prayer. In fact the proportion of bored "curious bystanders" in the audience has always turned out to be fairly large for any program.

Because we don't understand the farm or stock market reports in what seems to some mere unintelligible gibberish, should we say they

have no right to use of the wireless media? Haven't we already recognized that a "mass" is made up of many individuals and groups? And the more we water down, in order to reach more people, doesn't the material become less valuable for those for whom it is specifically designed? Does our expectation of "all-general" from mass media make it right? Or does it make European systems, with the frequently limited audience programs they sometimes offer, wrong?

So far, to get or hold time, we have had to go along with commer-

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### Radio-TV: economical educational tools.

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cial techniques, which tell us that, when it's on radio or TV, education must be entertaining. But we represent institutions whose resources are educators, not showmen. As long as we try to compete as entertainers we'll look like amateurs. But as educators it is we who are the professionals, and the commercial broadcasters who are the amateurs. There is no reason, or law of nature, which says that radio and TV should be only entertainment media.

● IF RADIO AND TV are to offer real education, now, as our age demands, these stations and programs must be rooted in educational institutions, whose business is education. Only by recognizing this can we avoid a compromise position in which what we offer will neither be valid education nor good entertainment.

We must not and should not have to compromise our teachers' professional standards as educators, on programs plainly labeled as, and planned for, regular education and often course credit, simply because this makes the public relations job harder for us. Public relations should explain and justify education -- not alter or destroy its techniques. Unless public relations

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**We must promote  
selective listening.**

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people recognize the need to justify this educational job and defend good education by TV, instead of trying to make "showmen" out of people who are educators, ETV cannot succeed, and the institution will find little help in a medium which can relieve many of the current problems of space, high enrollments and limited teaching staffs.

If you can't go along with my suggestions on this part, reflect on the demise of some 200 educational radio stations in the 1920's and 1930's. They too tried to behave as commercial stations did. They ended up neither fish nor fowl. They were dropped because they were not educationally justifiable for the university, college or school. We should not let this bitter lesson go unrecognized.

The number who watch the commercial program may be larger than that of people who use educational programs. But is more necessarily being really done to people, other than as affects their pocketbooks, by the show with the larger audience? Since when have

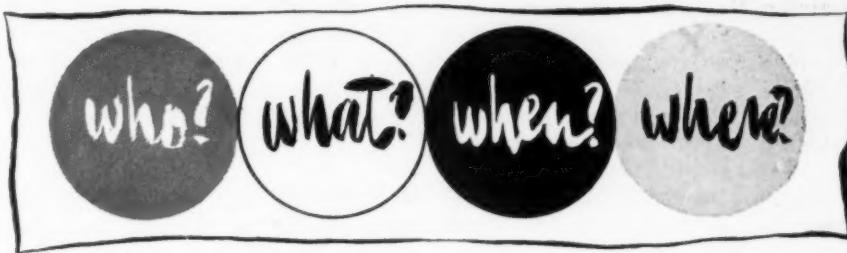
libraries and schools had to have as many people use them as the movies, in order to justify their expense? How many lives does a program or a station have to save, or genuinely enrich -- or how many intelligent active voters does it have to make -- before it's doing as much good as a program or station that titillates millions, or sells tons of soap or cigarettes?

That, I think, is the problem. And if we as educators don't meet it squarely, as befits our profession, who will? Is a system which will require selective tuning, much as we use time tables for transportation media, or special events, not possible of achievement, if we do an adequate public relations job of explaining it?

With an educational station we are saddled with the problem of developing this habit of selective rather than continuous listening, if the station is to operate as a real educational station.

● JUST BECAUSE this is a hard job, and one which does not square with the general idea of many public relations people, who want to reach lots of people with every program, as advertisers do, does not mean that it can be avoided. It certainly cannot be avoided if the public relations person responsible is true to the educational objectives of the organization he claims to serve. Let us recognize how before we go farther that education, even by TV, must be a quality rather than a quantity job -- though we hope the quantity will increase, just as the demand for more adult education seems to be doing. But failure to "pack 'em in" is not necessarily a failure

*Continued on page 25*



● THE CINCINNATI public schools offered some excellent suggestions recently on the subject of building successful television programs. These suggestions which appeared in the weekly news bulletin, were part of an article outlining what in-school TV must do.

1) Must be based upon the existing instructional program. The goal of a TV program should be to enrich the instructional program; to offer something that is not now being offered as effectively by some other medium or experience.

2) Must be planned by teachers, principals, supervisors, parents and pupils.

3) Must capitalize upon characteristics that are peculiar to the television medium, but will not necessarily be restricted to these alone. TV can make use of qualities that are found in motion pictures as well as the entire gamut of instructional materials. The successful program will, however, make full use of such characteristics as immediacy or timeliness, the ability to reach large numbers of people, and the ability to give emphasis to what has been taught in class.

4) Will have elements of showmanship. They should catch and hold attention quickly and be readily understood.

5) Must be more concerned with content, organization, and presen-

tation than with the desire to provide opportunity for children to perform. First consideration should go to the viewers.

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● TRIGONOMETRY is the newest course to be televised by Indiana University over WTTV of Bloomington and Indianapolis. Arrangements are being made with high school officials to permit their pupils to watch the twice-a-week course for which they can receive high school credit or certificate of completion.

Professor E. G. Sulzer, head of the Indiana University radio and television department, points out that the series will make available a basic mathematics course that is not taught in some small high schools in the WTTV area.

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● WTVS IN DETROIT will launch a campaign to acquaint citizens with the station (which has been on the air since last November) and will promote conversion of TV sets so they will receive both ultra high and very high frequency.

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● NEW YORK STATE (Albany) will launch this fall an experimental program of closed-circuit television for teaching and for

training teachers. Education Commissioner James E. Allen, Jr., says the plan was designed to help solve "critical problems" that included teacher supply and maintenance of standards in a period of expanding enrollments.

Systems in State Teachers Colleges at Albany and Brockport would allow student-teachers to observe instruction in high and elementary schools on the campus. Television also would be used for direct instruction both in the colleges and in the campus schools.

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● TUITION-FREE college credit courses are being offered to the general public by Chicago's educational TV station WTTW. Courses in general biology, freshman English, social science and national government will be telecast by the Amundsen, Crane, Wilson and Wright branches of the Chicago City Junior College.

The credit earned by a TV student is identical to that earned by students taking the same course on the campus.

Dr. Benjamin C. Willis, general superintendent of Chicago Schools says the staff anticipates the program will be expanded over a three-year period until the entire basic offering of the City Junior College will be available to the televiwer.

"Under the expanded program, a student will be able to earn a two-year Junior College diploma entirely by television," says Dr. Willis.

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● GOING HIGH POWER is Pittsburgh's educational TV station, WQED, which has increased

its strength approximately five and one-half times, or technically from 25.07 kilowatts of effective radiated power to 138.00 kilowatts of effective radiated power.

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● OMNIBUS FEATURES will be available to schools, colleges, other educational and civic organizations. First to be available from the 90-minute television program are *The Constitution* and *Lincoln Series*. Information on forthcoming productions will be furnished at the time of their release by the McGraw-Hill Text-Film Department.

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● WHO CAN and does watch educational television?

That's what the Educational Television and Radio Center at Ann Arbor, Mich., hopes to find out through three grants-in-aid awarded as part of a program of audience research in the educational television field.

The relation of television to in-school programming and adult or community education has been the concern of millions of Americans since the introduction of the medium.

Now, with 20 educational stations on the air and interest in ETV rising in dozens of American communities, it is possible to begin evaluating measuring and defining the characteristics of ETV audiences, according to President H. C. Newburn of the Center.

Center grants were received by the University of North Carolina at Chapel Hill, Michigan State University at East Lansing and the University of Houston. These grants will supplement and help

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## Book Review

*AUDIO CONTROL HANDBOOK* by Robert S. Orin-gel. Published (1956) by Hastings House, 41 E. 50th Street, New York 22, New York. 134 pages and 7-page glossary of broadcasting terminology and 3-page index, illustrated 8½x10. \$6.50.

- IN THE preface, the author states that this manual will be used in the main by students or beginners having little or no technical electronics background. He has "attempted to describe and explain broadcast audio operations in non-technical language, where possible, without omitting the trade terms or language of the industry."

Many people without technical training are employed today in the broadcasting industry. This book is published for these persons as well as for the beginning student of audio in radio and television operations. It has many illustrations and diagrams and should be very effective in explaining the function and operation of all the units of audio equipment employed from the microphone through until the audio signal enters the line to the transmitter or network.

A single channel control board is first outlined in a block diagram followed by a multichannel board, and the audio signal is traced with an explanation of the functions of each unit in the channel. A number of commercially manufactured consoles are pictured; a brief explanation of the features of each one is given.

- THERE is a chapter on auxiliary console input facilities which includes microphones, turntables

and tape recorders. A well illustrated chapter on records, tape and tape editing gives the student an excellent idea of the techniques employed in these much-used broadcasting facilities. Considerable space is devoted to operating techniques with levels, balance, microphone placement, studio setups, and turntable and tape playback techniques all receiving attention.

Various types of program operations are discussed in detail and the necessary audio operations outlined for each type of program. A chapter is devoted to studio-control room communication with illustrations and explanations of many commonly-used hand signals. Remote broadcasts, and remote equipment and setups as well as studio design and construction practices are treated.

- THE AUTHOR also outlines FCC rules pertaining to audio control operators. He discusses the other members of the broadcast team with whom the audio control operator makes daily contact and outlines their job functions. He concludes with a glossary of broadcasting terminology. Helpful review questions follow each chapter.

This reviewer believes that the *Audio Control Handbook* will accomplish its purpose as outlined in the preface. There are a few slight technical inaccuracies which

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# *The Hagerstown Story*

## How and how much can television increase the potential of Education?

● THE WASHINGTON County, Maryland, Public School System with the support and assistance of the Radio-Electronics-Television Manufacturers Association and the Fund for Advancement of Education is making a thorough study of the ways that closed-circuit television may be used by an entire public school system as an integral part of the regular program of instruction, and will evaluate the effectiveness of the various methods that are developed.

The program was initiated when school opened in September, with more than 6,000 pupils in two high schools and six elementary schools receiving an important part of their daily instruction by television. Current plans call for the extension of the program to the entire Washington County School System by September, 1958, with all 47 schools supplied with closed-circuit equipment and approximately 20,000 pupils benefiting from direct instruction by television.

The project is the result of months of discussion and planning by representatives of the local school system, RETMA, and the Fund, with the assistance and advice of specialists from the U. S. Office of Education, the National Education Association, the Joint Council on Educational Television and other educational leaders.

● THE RETMA School Equipment Committee began an investigation of the feasibility of such a project more than a year ago, according to Ralph S. Yeandle, RETMA School Equipment Chairman. He expressed enthusiasm about the selection of Hagerstown by the participating agencies as the locale for this combined effort. Mr. Yeandle pointed out that the curriculum study and the building construction program in progress in Washington County provide a fine background for such a comprehensive study. He indicated that such an organized and unified effort should make a significant contribu-

tion to the advancement of educational techniques and further the development of flexible, dependable, simple-to-operate television equipment for school use.

Superintendent of Schools, William M. Brish, indicated that the primary purposes of this new venture are two-fold: first, to discover ways in which closed-circuit television may be used to improve the program of public education at the elementary and secondary school levels; and second, to test ways of dealing with such current educational problems as the shortage of qualified teachers, rapidly increasing enrollments, and the lack of

adequate facilities. Mr. Brish suggested that both aspects of the program have important national implications, and indicated further that steps have been taken to provide a careful evaluation of the results. He also believes that the project gives a new opportunity to restudy the nature of the learning process, the elements of how pupils learn, and the effectiveness of various teaching techniques.

"There is no doubt," commented Mr. Brish, "that television offers opportunities to do things in education which are now impossible. We mean to find out just how far we can raise our sights with this

*PLANNING a series of lessons on local history is an elementary social studies work group meeting at the closed-circuit TV workshop, Hagerstown, Maryland.*



new technological invention. For example, will television permit us to use the best talents of our teachers on a much wider basis than at present? School systems need more really top-notch teachers, but we have never figured out how to use the ones we do have to maximum advantage. Television may provide ways of doing this, and at the same time improve the status of the teachers. We may indeed make the profession of teaching so challenging and desirable that teaching will compete favorably with other professions for the most capable minds in our society."

Mr. Brish also added that television may be able to free teachers from routine and repetitive responsibilities so that they will have more time to work personally with individuals or small groups of students.

● TWO NEW high schools, one opened this September and the other ready next year, have been designed specifically to permit the maximum use of televised instruction. All the older buildings will be modified for the reception of televised lessons.

At the high school level, television instruction in the Washington County Schools is being offered in 9th grade science; 10th grade mathematics; 11th grade U. S. History; 12th grade English. In the elementary school, the program includes 6th grade science; 5th grade arithmetic; 4th grade social studies; and some instruction in reading and number readiness in grades 1, 2, and 3. During the first term, no pupil will receive television instruction in more than one course. Throughout the initial phases of the project, school au-

thorities plan to put the emphasis on exploration and development to discover the most effective ways of using closed-circuit television.

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### **Closed-circuit TV is star of county study.**

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Teachers themselves will be encouraged to participate in the decisions of the best ways to use the new educational medium.

Use of closed-circuit television by Washington County's Schools will not be confined to direct classroom instruction of pupils, however. The equipment will also be used for supplemental enrichment of the curriculum, extension of the in-service training of teachers and interpretation of the school program to interested public groups.

Emphasis will be placed on developing ways that closed-circuit television may be used under normal conditions. Careful records of what is done will be kept for re-study and evaluation.

● IN PREPARATION for classroom instruction using television, approximately 60 teachers, principals, and supervisors were organized into a six weeks workshop between July 9 and August 17. This group was concerned with a new look at the total scope and sequence of the areas which will be included in the television lesson. In addition the group was concerned with planning in a detailed way, the lessons for the first six weeks of teaching. Probably any and all of the best techniques that have been used in good classroom work can now be used on television.

The Washington County Schools are aiming to capitalize on the possibilities which television may offer for making content increasingly meaningful to more boys and girls. If it is true that one advantage of television is that every child has a front seat in the classroom, then demonstrations, experiments, and visual aids will be more meaningful and intelligible to all children. Perhaps the greatest aid that television may offer is the fact that the instrument itself provides a concentration of attention for the viewers.

The total workshop personnel was divided into ten discussion groups and seven subject matter areas. The discussion groups concerned themselves with techniques and practices involved in learning. The subject matter groups were concerned with the best means of applying these procedures to the several content areas. From time to time during the workshop, specialists who have had experience in the theory and practice of television instruction served as consultants.

- ONE FEATURE of the projected plan for instruction is the fact that the teaching is being done by teams of people, with the person who appears on television serving as chairman of the teaching group. It is of greatest importance that

classroom teachers be involved as acting members of the teaching group, if the television medium is used to the greatest advantage.

Classroom teachers have the opportunity to adapt for individual students, those basic concepts that have been presented on television. These groups meet from time to time to evaluate what has been taught, and to project the lessons in the immediate future.

At the conclusion of the workshop in August, Superintendent Brish made the following statement: "We recognize that we will be faced with many problems during our five year program. We are aware that educational television cannot be born full-blown and in full stride. Any program to establish educational television must necessarily grow in scope and stature over several years. We have every confidence, however, that educational television will produce a steady upgrading of the educational level.

"That is why we are so enthusiastic about this installation. We are determined that our school system will make a worthwhile contribution to the advancement of education and to the improvement of the quality of the school program. We feel that the future possibilities of closed-circuit television in education are almost unlimited."

*A TEACHER who can arouse a feeling for one single good action, for one single good poem, accomplishes more than he who fills our memory with rows on rows of natural objects, classified with name and form.—Goethe.*

## St. Louis Slants Show For Senior Citizens

● IN KEEPING with the advancing years of us who were once 40, life might well be said to begin at 65, for this is the most common age for retirement from business activities and a time, also, when family responsibilities have usually ebbed. With this in mind, radio station KSLH has offered a 13 week series called "Aging Successfully." Because this period after retirement has become the focus of much attention these days and in order to acquaint listeners with a knowledge of gerontology, KSLH brought Robert L. Peterson of the University of Illinois to the microphone with interesting, informative talks full of ideas for planning and enjoying the leisure of later life. The half-hour programs were produced by station WILL, voice of the University of Illinois, in Champaign.

It is true that along with the pleasures of age come problems and adjustments. In his "Aging Successfully" broadcasts Mr. Peterson attempts to help his audience foresee some of the difficulties which may arise and makes suggestions for coping with them. He discusses "second careers" which have made retirement profitable and interesting for many people. He talks about medical, philosophical, and psychological aspects of aging successfully. He considers financial problems and sources of in-

come for the senior citizen. He speaks of intellectual activity and the myth of declining mental agility often attributed to age.

● IN the course of his informal talks Mr. Peterson also interviews older people who tell how revival of their hobbies and dormant interests has given them a new start in activities too long neglected for lack of time. Occasionally a specialist in one of the topics being discussed visits with Mr. Peterson in the studio. From these microphone conversations comes an abundance of ideas which should interest anyone looking forward to and planning for his old age. KSLH believes "Aging Successfully" will open new channels of thought for listeners and serve as a springboard for valuable group discussion.

As the series points out, old age has more assets than liabilities. From our position on the threshold of 65 we may look ahead to exciting new experiences, interests, friends, activities -- all to be enjoyed in an atmosphere of serenity unappreciated by youth. "Aging Successfully" is designed to help KSLH listeners capitalize on these assets and minimize the liabilities. It is designed to show us how life, which got its start at birth and according to some, began at 40, can continue anew at 65.

# Public Relations Problem

*Continued from page 16*

educationally. It only proves that education is maintaining its standards -- which must be the same for education by TV as for education in the classroom -- if the whole educational structure is to become stronger instead of weaker than it is now.

Is the selling of soap, at a cost of one thousandth of a cent per listener, necessarily better or more legitimate than the broadcasting of information and education at a cost of a dollar or more per listener? If education were profitable, there would be more businessmen in it. But since when do we measure success in education by how many we reach, rather than what happens to them -- regardless of whether or not this happens to square with commercial radio or TV station needs for advertising? When do we begin to think straight about such problems, and to talk straight? Why let ourselves be trapped into using only commercial terms? Let's talk and think and evaluate by our own, i.e. by educator's standards. Is the use of a frequency for this job any less legitimate than the use of a valuable plot of ground for a school, which may only accommodate a few hundred students less than one-quarter of the hours of each day, less than half the days of the year? Of course not! Our common sense is available when we're on familiar ground. Let's insist on using it also when we're talking about educational uses of radio and television.

This is not to say that there is still not a huge job to be done in

general public relations on behalf of our schools and their various activities -- for our medical schools, teachers' salaries, music, drama and all the rest. This job can and must be done over every available commercial outlet, as well as over education's own stations. But this job I'm not afraid of. Commercial broadcasters and the public understand it. They are used to general, non-course-integrated programs.

● OUR BIG CHALLENGE is in justifying, to the public and education's governing bodies, the need and economy of what education's own stations can do, as central, basic instruments of real education.

Of course you have the right to insist that this education must be good. Your school should be represented by its best teachers. The courses should and must be well-organized. But they must not be forced to become entertainment as such. This means that the public relations representative must recognize and reconcile two functions, where he has often seen only one before. He must increase and improve the job he already does and knows -- the providing to any and all stations of general programs to help him raise funds and secure community support. But he must also recognize this new responsibility. And for some this is likely to require some basic reorientation and self-education. But with the pressure on space, facilities and personnel which many schools are now feeling, it behooves us all to look twice at the possibilities which

"education's own" stations offer in this crisis.

A low-power FM or TV station can generally be built and equipped for the cost of two or three average classrooms. As an instrument of education, relieving pressure in all curricular areas, and helping to keep out of congested areas those things which can be done as well by radio or TV, such a station should not be passed up lightly. For what radio and TV can do as direct teaching instruments is now no longer a matter of conjecture. It has been proved, and data are available from scores of courses on this specific point.

This is perhaps only one of many challenges facing college and school public relations people today. But I happen to think it is one of the most important. For unless the legitimacy of education's right to use what have previously been considered only "mass media" is established quickly, and once and for all, education will be condemned to leave unused these great twentieth century electronic instruments which have come into our hands just in time to help us meet America's twentieth century school crisis.

## Book Review

*Continued from page 19*

are apparent to the broadcast engineer but which may simplify the explanation to the person with no technical training. We differ, too, on some of the terminology used; however colloquial expressions differ with geographical locality and broadcasting expressions used may also be expected to vary over the country. CECIL S. BIDLACK,  
*NAEB TV Engineer*

## Who? What?

*Continued from page 18*

underwrite research programs being undertaken in the three communities.

"We are interested first in defining the viewer of ETV," President Newburn indicated in announcing the grants. "Although the Center is not a research agency, we want to stimulate needed research work in this area on a wide basis among available research agencies."

Dr. Stephen B. Withey of the Survey Research Center, University of Michigan, will co-ordinate research activities directed at a definition of the hard-core audience now viewing educational television.

• THE THREE initial grants will provide partial support for the following projects:

1.) \$1,350 to the University of North Carolina for a study of viewers and non-viewers of educational television, under the direction of J. Stacy Adams of the Institute for Research in Social Science at Chapel Hill.

2.) \$2,000 to Michigan State University for a study of television and radio viewing and listening habits within Station WKAR's listening audience under the direction of Irving R. Merrill, director of research at Michigan State's ETV station.

3.) \$3,225 to the University of Houston for a research study project dealing with the psychological identification of the viewing audience of KUHT, Houston's ETV station, under the direction of Richard I. Evans, professor of psychology at the University of Houston.

# Education BY Television

*Continued from page 5*

and her DING-DONG SCHOOL, the vicarious participation induced by other programs utilizing formal (or should I say the informal) methods of the tried and true kindergarten should arouse the latent interest of any educator in the possibilities of television as an educational medium. Here, where often funds or teachers, or both, are unavailable, the mother in the home can be of enormous service in preparing the child for school. All that this area has needed is training and direction and along comes television to provide what we formerly lacked in helping to solve one of the great problems in pre-elementary training. With books covering this area of early learning, so inexpensive and so well-written and illustrated, with mothers so anxious to help and so well educated to do so, with television programs well-devised for learning, where can we *not* go with this boon to early training of children?

Literally hundreds of school systems have been induced to try television programs for either illustrative or direct teaching in the classroom with varying results. Philadelphia was one of the earliest experiments led by an enthusiastic physical education teacher, Miss Martha Gable. (It took a physical education teacher to work in an experimental fashion, a point of departure from the regular more prosaic methods of the traditional classroom!) At first, the subjects were health, safety, social adjustment, vocational, art, music, or the more or less special subjects, re-

quiring, too, special supervision, which might be confidently received over the air. Today, science, the social studies, modern foreign languages, English, reading, writing, arithmetic have all been added to the television curriculum. This work was begun in 1948 over commercial stations. Now Philadelphia will have its own educational station, opening this year as a community station, serving the entire Delaware Valley. Philadelphia's story is much the story of many cities. New Orleans, Atlanta, Memphis, Denver, San Francisco, Seattle, Cincinnati, Detroit, Pittsburgh and St. Louis all experimented over commercial stations before deciding on their own station operations either under community auspices or under the aegis of a nearby university.

● THE ANSWER to the question of the values possessed by television to relieve a shortage of teachers or lack of classroom space has not become so necessary today in light of the controlled experiments under grants of the Fund for the Advancement of Education provided in 1955 and in 1956 particularly at Pittsburgh and St. Louis.

While not putting aside the values inherent in a specially well-prepared lesson, given by a specialist teacher, and the consequent acceleration in learning, we can expect no shortcuts to solving the problem of teachers to man our classrooms or to shunt pupils back into the home-environment for the continuation of their regular studies, unless it be to solve the special purposes of

vacation schools, make-up classes or the continuation schools. What we can and do expect through television, is an improvement in the quality of teaching and a consequent re-orientation of retarded, average, and gifted pupils by means of the release of some teachers as special task forces and the more efficient use of available space. This does not seem too much to ask.

● ALREADY four of our newest high schools, the Hudson's Bay High School at Vancouver, Washington, the Charles Linton High School at Schenectady and the two new high schools, North and South in Hagerstown, Maryland are being fully equipped for TV reception and production, camera pick-up points being set up in 18, 20, or 22 locations on each school campus. The Hagerstown project embraces all of Washington County with 67 elementary and secondary schools participating—the Fund for the Advancement of Education, the Washington County Board of Education, the Radio-Electronics Television Manufacturers Association, and the U.S. Office of Education all cooperating. This is a brand-new type of research into the problems of the classroom under the assumption that what has already been learned, justifies such further research.

The emphasis is removed from utilizing presently designed either vidicon or orthicon cameras and standard TV studio techniques to that of developing television as an aid to instruction, with the guarantee that equipment will be developed and studio techniques revised to adapt television to education rather than adapting education to

television, which the Office of Education believes to be an already outmoded and obsolete concept. Already, the doctors have entirely new equipment for use in their surgical and hospital utilization of television.

Nevertheless, Pittsburgh and St. Louis have a story to tell—they are going - experiments in which much has already been learned. In Pittsburgh, reading, arithmetic, and French are being taught on the 5th grade level. Characterized as a "total teaching experiment," the project is a cooperative effort of the Pittsburgh Public Schools and the City's educational television station, WQED. It involves participation of 20 classrooms in 16 separate buildings located in 10 different school districts.

It is too early to say how the groups taught by television compare with the regular 5th grade groups taught by traditional classroom methods, for the achievement tests have not yet been tabulated. However, the reaction of teachers participating and the pupils themselves and that of qualified observers, all seem to indicate that the pupils thoroughly enjoy the television lesson- broadcasts and that they have gained a great wealth of practical knowledge from them, as well as training in skills. There is some suggestion that study habits induced by the broadcasts are tending to carry over into other subjects. The parents who are watching the programs too, are quite satisfied with the results.

Adverse criticism has been directed to the problem of pacing the television instruction to suit the range in variation in the learning rates of individual pupils. However, since these problems are encounter-

ed in all classrooms, greater study must be given and is being given to this problem in next semester's preparation of the programs.

● IN ST. LOUIS, also a cooperative project between the local school-system and educational Station KETC, three subjects, but on three different grade levels are being tested: 2nd grade, spelling; 9th grade general science, and 9th grade English composition. The pattern of instruction differs from Pittsburgh in several respects. There, the TV teacher is primarily responsible for "the total teaching job" while the teacher maintains order, distributes and collects papers and sees to it that television study assignments are carried out. In St. Louis, the classroom teacher is the supervisory teacher who (1) being fully qualified in the field being taught, can under-study the TV teacher in case of emergency, (2) who maintains classroom decorum during the program, handling all special questions arising and, (3) receives the student work assigned by the television teacher. She, herself, has an assistant teacher who helps with the paper work, mails in to the station each day such reports and information as the TV teacher needs to help her in her current lesson, marks compositions and examination papers and sees that the TV set is properly tuned on and adjusted to the best use in the classroom. Here is the place for teachers-in-training or the type of aides familiar to us in the Bay City, Michigan experiment conducted without television.

The St. Louis experiment includes both experimental and control groups, both using the same text materials, following day by day the

same course of study. The TV classes, however, are 90 to 100 in size, a feature added to help test reception by abnormally large classes. This study began in the spring semester of the current year. It would be fair to say, the same type of results are indicated as in Pittsburgh — satisfaction, even before achievement tests are completed, in the type of work being accomplished.

● THESE EXPERIMENTS are following a pattern even with their diverse methods of approach for they both share again in the intrinsic values within the physical make-up of television. As I see them, they are:

- 1) Psychologically, television makes students participants, a part of the action in progress.
- 2) For viewing groups it provides a fixation part for visual attention.
- 3) It enables the teacher by "teaching the camera" rather than a physically-present class to maintain eye to eye contact with every student in the class, receiving the lesson, *all the time*, thereby achieving the ultimate in attention from the individual viewer;
- 4) in consequence of fixation and the participation induced, TV reduces the phychological distance between teachers and *each* and *every* viewer regardless of class-size and physical separation distance;
- 5) it provides a means of directing pupil attention, concentrating it upon precise detail under discussion;
- 6) there is also on report of educators who teach over the medium that there is a tending toward immediate emotional involvement on the part of each student in a "pictured" situation.

I promised to return to closed-circuit television before I concluded. There is no essential difference between the process, the development, the finished product of closed-circuit television and that of regularly broadcast television. It is simply a difference of location of the transmitting sound and picture. For experimentation, closed-circuit offers many possibilities because of the close proximity of the teacher and the pupil. Suggestions can be made more readily for changes in presentation. Even 2-way communication may be easily established by wired comment or by wired questions and TV answers. The implications for teaching here may be likened to the lecture-demonstration *vs.* the discussion group, though ordinary television may accomplish both, by anticipating questions or making general and even specific replies.

It would be hazardous for anyone to argue that it could replace individually guided participation by the learner in the discussion classroom. What it may and even does provide is the background by which any

teacher-learner situation may be vastly improved.

In or out-of-school television is here to stay. Unless we make full use of its potential in education, we shall be failing our profession—and our country.

## President

*Continued from page 6*

ments. This issue with only minor changes in make-up due to a change in publisher is the answer to our efforts to maintain regular publication. One other change has been effected. The membership headquarters has been moved to the seat of publication in order to conserve on mailing costs.

It is gratifying to know that the *JOURNAL* is held in high enough esteem for the *NAEB* to want to assist in its continuation. The assistance has been motivated by the realization that our principles, accomplishments and our leadership are important elements in educational broadcasting which deserve encouragement. Thanks, *NAEB*.

*Great science nobly labored to increase the people's joys but every new invention seemed to add another noise.*

—Sir Alan Patrick Herbert

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